

FRONT DERAILLEUR - CURRENT RANGE

(since 2015)			(since 2018)	(since 2017)	(since 2018)

WARNING!

This technical manual is intended for use by professional mechanics.
 Anyone who is not a qualified professional for bicycle assembly must not attempt to install and operate on the components independently due to the risk of carrying out incorrect operations which could cause the components to malfunction, resulting in accidents, physical injury or even death.
 The actual product may differ from what is illustrated, as the specific purpose of these instructions is to explain the procedures for using the component.

1 - TECHNICAL SPECIFICATIONS

FRONT DERAILLEUR 11s	CAPACITY (TEETH)	MAX CHAINRING (TEETH)	SHEATHS ANGLE
SUPER RECORD™ RECORD™ CHORUS™ POTENZA 11™ CENTAUR 11™	16	55	61° - 66°

2 - COMPATIBILITY

FRONT DERAILLEUR 11s	CRANKSET	COMMANDS	CHAIN
SUPER RECORD RECORD CHORUS	Bullet Ultra 11s Bora Ultra 11s Ultra - Torque 11s Comp Ultra 11s	Ergopower Ultra - Shift 11s (CURRENT RANGE)	11s RECORD CHORUS
POTENZA 11™	Comp One 11s Power - Torque+ 11s (POTENZA 11™)	Ergopower Power - Shift 11s (POTENZA 11™ - 2017)	11s CAMPAGNOLO
SUPER RECORD RECORD CHORUS	H11 CAMPAGNOLO	H11 CAMPAGNOLO	11s RECORD CHORUS
POTENZA 11™	Ultra - Torque 11s (POTENZA 11™ - 2018)	Ergopower Power - Shift 11s (POTENZA 11™ - 2018)	11s CAMPAGNOLO
CENTAUR 11	CENTAUR 11	CENTAUR 11	

WARNING!

Combinations other than those provided in the table may cause malfunction of the drivetrain and cause accidents, personal injury or death.

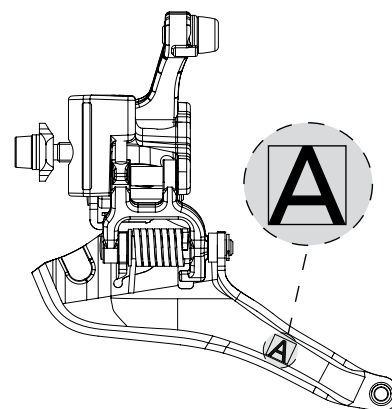


WARNING! (ONLY FOR SUPER RECORD / RECORD / CHORUS FRONT DERAILLEURS)

The front derailleur is NOT designed to operate (and is therefore not compatible) with Ultra-Shift / Power-Shift Ergopower controls and Bar-End controls from the 2014 range and prior which do not bear the distinctive marking.

The use of parts which do not belong to this range may significantly reduce the overall performance of the drivetrain, therefore we recommend not mixing parts from the old ranges with those from the new.

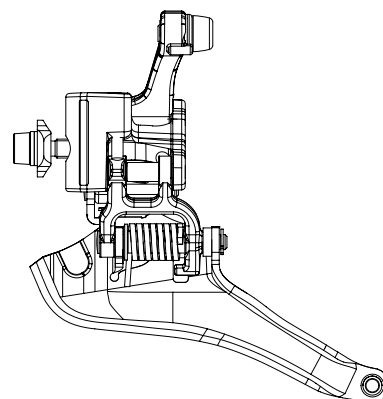
In order to help you and to enhance performance, Campagnolo has introduced a distinctive mark (a boxed letter as illustrated here) on the new Super Record, Record and Chorus unit parts in order to point out their compatibility. Therefore, please ensure that the letter in the parts that operate for shifting and in the parts that operate for derailings correspond.



WARNING! (ONLY FOR POTENZA 11™ FRONT DERAILLEURS)

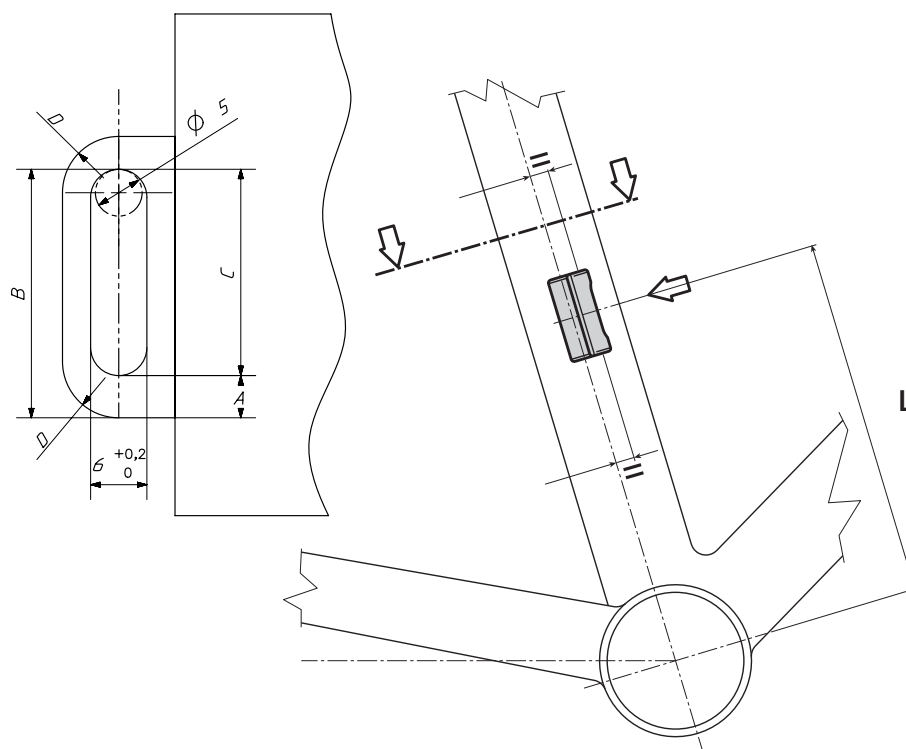
The Potenza 11™ derailleur is designed to function exclusively (and is therefore compatible) with Ergopower Power-Shift controls and Bar-End controls, marked with the letter B on the body, or, if combined with the Ultra-Torque Potenza 11™ HO crankset with the CD chainring, with Ergopower Power-Shift commands marked with HO and with the letter C on the body.

The use of components that do not belong to this drivetrain may significantly reduce the overall performance of the drivetrain and it is therefore advisable not to use components that do not belong to this drivetrain.



3 - INTERFACE WITH FRAME

3.1 - BRAZED ON VERSION



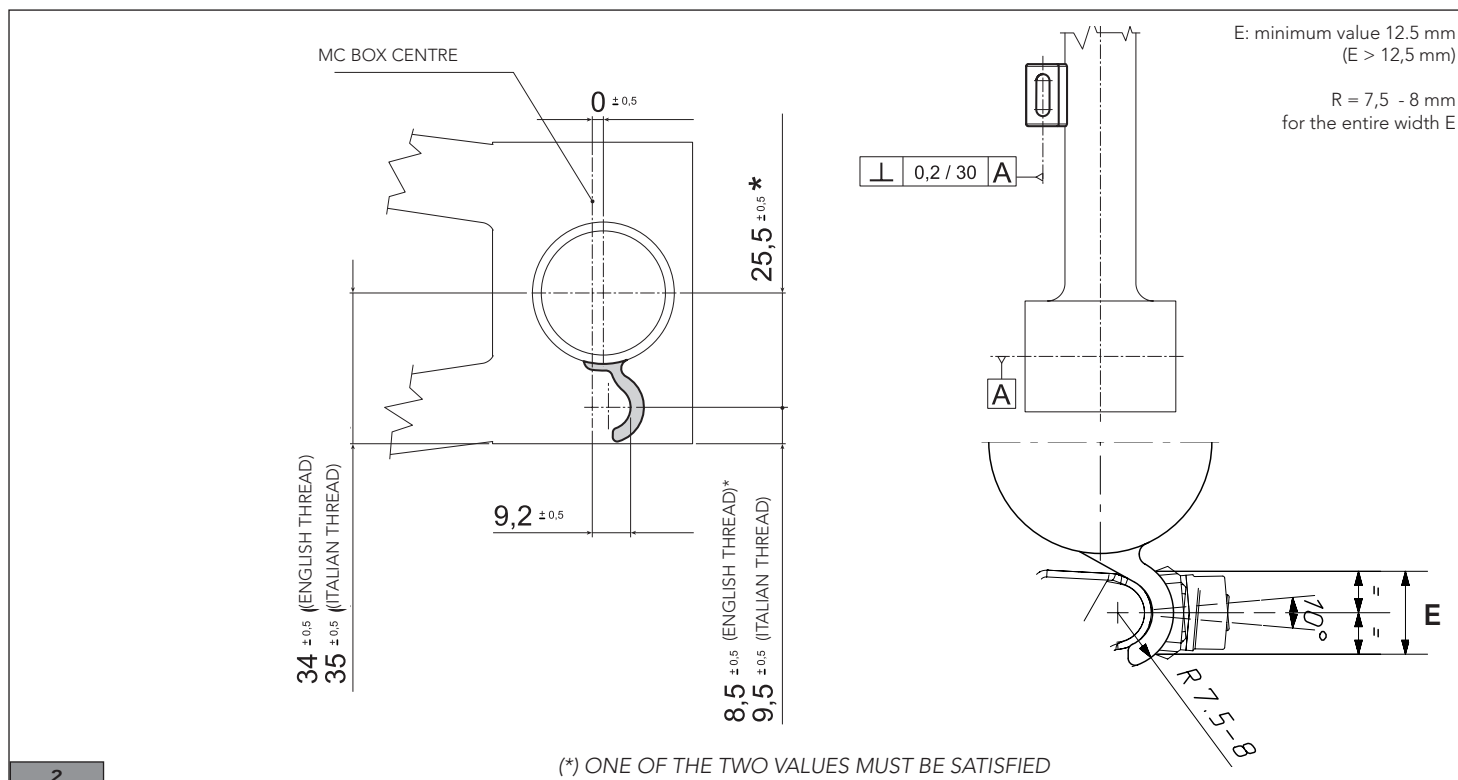
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In order to have compatibility with all the chainrings indicated in table 1, the following measurements must be observed
C: minimum value 22 mm ($C > 22$ mm) - B: maximum value 27 mm ($B < 27$ mm) - A: maximum value 5 mm.

Increasing the dimensions of the slot, in other words, the C value, and therefore decreasing A, the compatibility of the chainrings can be increased beyond the indications in table 1.

TABLE 1

VALUE L	BRAZED ON MOUNT CENTRING	COMPATIBLE CHAINRINGS	
		CHORUS / POTENZA 11™ / CENTAUR 11	SUPER RECORD / RECORD
138 mm	48	44-45-46-47-48-49-50-51-52	44-45-46-47-48-49-50-51
140 mm	49	45-46-47-48-49-50-51-52-53	45-46-47-48-49-50-51-52
142 mm	50	46-47-48-49-50-51-52-53-54	46-47-48-49-50-51-52-53
144 mm	51	47-48-49-50-51-52-53-54-55	47-48-49-50-51-52-53-54
146 mm	52	48-49-50-51-52-53-54-55-56	48-49-50-51-52-53-54-55
148 mm	53	49-50-51-52-53-54-55-56-57	49-50-51-52-53-54-55-56
150 mm	54	50-51-52-53-54-55-56-57-58	50-51-52-53-54-55-56-57
152 mm	55	51-52-53-54-55-56-57-58-59	51-52-53-54-55-56-57-58



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3.2 - CLAMP-ON VERSION

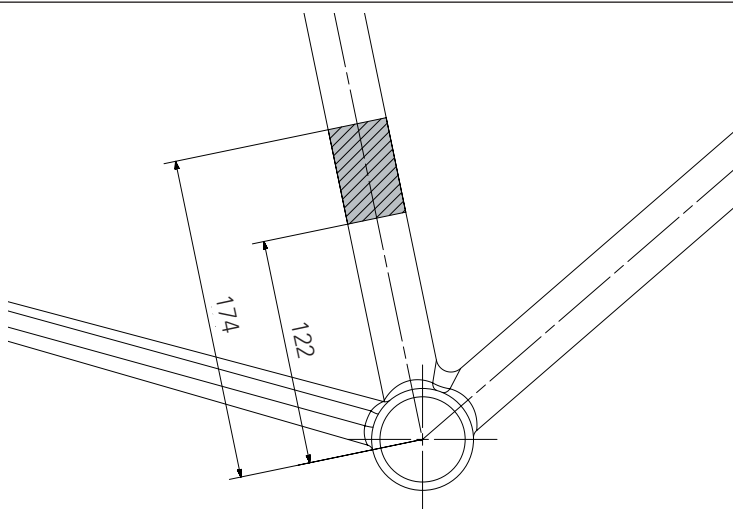
The design indicates the area which must be cylindrical for fitting the clamp-on and to have compatibility with all the chainrings.

The clamp-on centreline should be positioned approximately at the following distances.

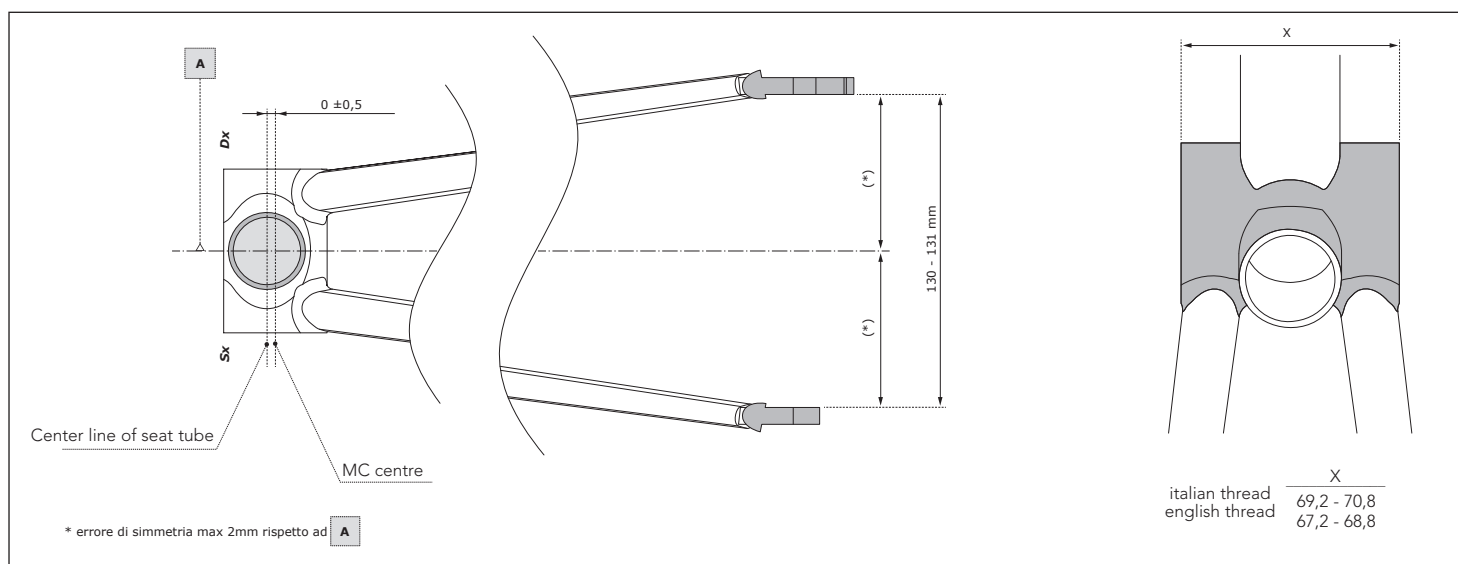
chainring 44	130 mm
chainring 52	150 mm
chainring 58	162 mm

D 35 + 0,8 / - 0,2

D 32 ± 0,2



3

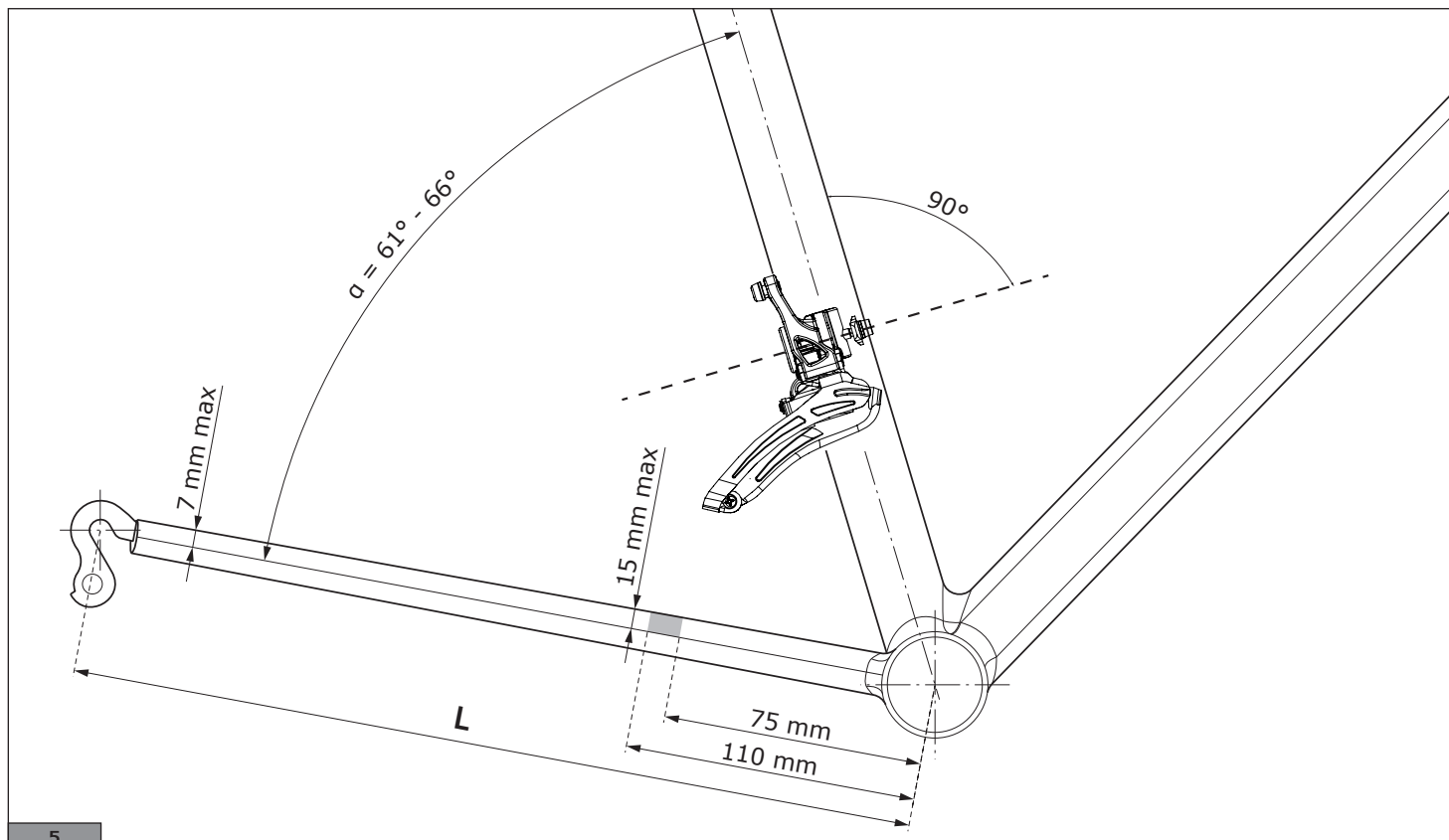


3.3 - SHEATHS SIZING

α = virtual angle between seat tube passing through front derailleur mount and lower drop-outs

L = lower drop-outs length

The graph assumes that the front derailleur fixing screw axis is perpendicular to the axis of the seat tube.



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FRAMES FOR TRADITIONAL BRAKES

L = 405 mm min.

FRAMES FOR DISC BRAKES

L = 410 mm min.

4 - ASSEMBLY

4.1 - CHECKS BEFORE ASSEMBLY

- Make sure the crankset is correctly mounted and check that there is no clearance, by pushing the crankset in the direction of the bottom bracket axis.
- Check the compatibility of the front derailleur with your frame.
- For a correct adjustment, this front derailleur must absolutely provide the cable tension adjuster. If there is no front derailleur cable adjuster on the frame, the Campagnolo adjuster (Fig. 1) must be fitted, which is included in the package of the Ultra – Shift command of the current range.
- NOTE (ONLY FOR SUPER RECORD / RECORD / CHORUS): In case of particularly flexible brazed on mount, use the front derailleur in the version that includes the "Secure Shifting System" (Fig. 2), a system that provides an additional component that increases the stiffness of the front derailleur - frame set.

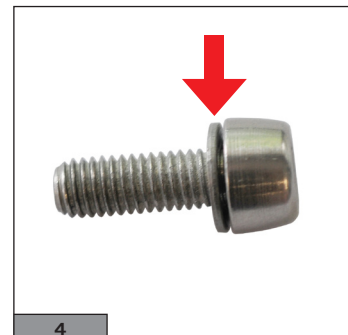
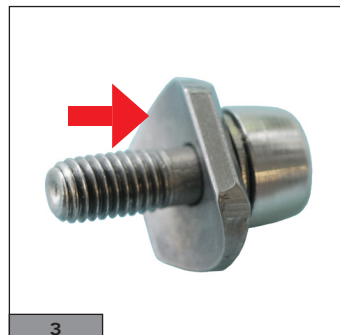


4.2 - INSTALLATION OF THE FRONT DERAILLEUR

• FRAME WITH "BRAZED ON" MOUNT:

Fit the front derailleur with the supplied screw and concave washer (Fig. 3), without tightening torque, to the brazed on mount of the frame, since first an exact positioning of the front derailleur must be performed.

If the Chain Security Device (CSD) that prevents the chain from falling between the smallest chainring and the frame must be fitted, use the screw with flat washer (Fig. 4).



• FRAME WITH "CLAMP-ON" MOUNT:

Fit the front derailleur to the clamp-on using the screw with flat washer and tighten the front derailleur on the clamp-on with **7 Nm (62 in.lbs)** (Fig. 5).

Mount the clamp-on to the frame without tightening to torque since first an exact positioning of the front derailleur must be performed.



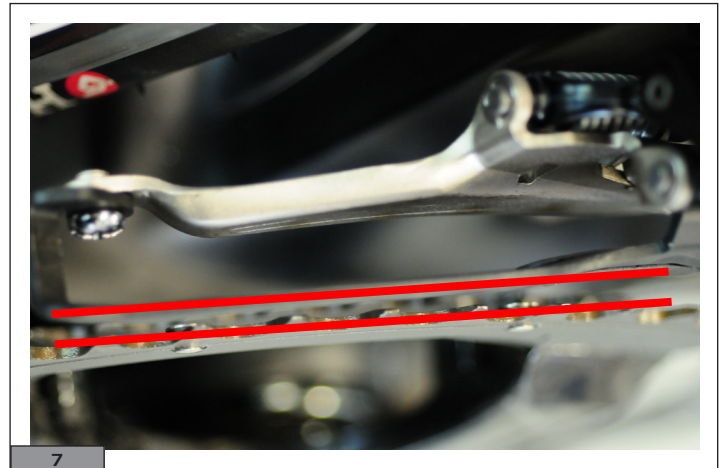
4.2.1 - POSITIONING OF THE FRONT DERAILLEUR

1) It is very important to place the front derailleur exactly, therefore it is necessary to use the Campagnolo UT-FD020 tool that allows to:

- Adjust the height of the front derailleur so that the fork remains at a distance of 1.5 - 3 mm from the largest chainring (Fig. 6).



- Adjust the front derailleur the external side of the derailleur cage must be parallel to the chainring (Fig. 7).



- 2) Check that the tool is compatible with your crankset (Fig. 8).

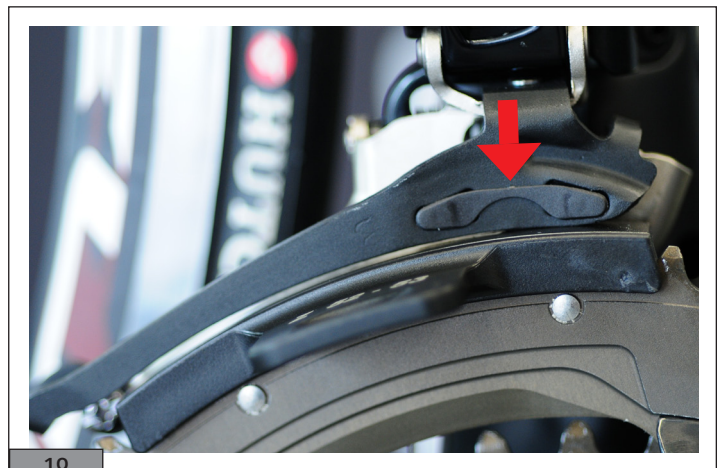


- 3) Fit the tool on the larger chainring having the hand crank almost in horizontal position, so that the longest teeth rest on the bottom of the tool's spline (Fig. 8).



- 4) Turn the chainring in an anti-clockwise direction, moving the tool under the derailleur cage.

- 5) Rest the outer cage plate on the tool in the front area (Fig.10).



6) Turn the front derailleur until the outer cage plate is perfectly parallel to the white line (Fig.11).

7) Keep the front derailleur in position and tighten the mount screw to the prescribed torque: **7 Nm (62 in.lbs)**.

- In case of using the front derailleur with clamp-on, tighten the clamp screw to the prescribed torque: **5 Nm (44 in.lbs)**. When with the clamp-on was used the Chain Security Device (CSD), before tightening to torque, check that the right surface of the fin has a distance of 1 mm to the smaller chainring.

⚠ WARNING!

If you have a carbon fibre frame contact the frame manufacturer in order to ensure that it will not be damaged after tightening to a torque of 5 Nm (44 in.lbs) or to define the actions to be taken in order to prevent damage. Even the slightest damage caused to a carbon fibre frame can cause damages which may lead to accidents, injuries or even death.

8) After locking the front derailleur, check that the fork is always resting against the tool and that the outer edge is parallel to the white line (Fig. 11).

9) Turn the chainring clockwise, remove the tool from the chainring and check that the front derailleur is working correctly (Fig. 12).

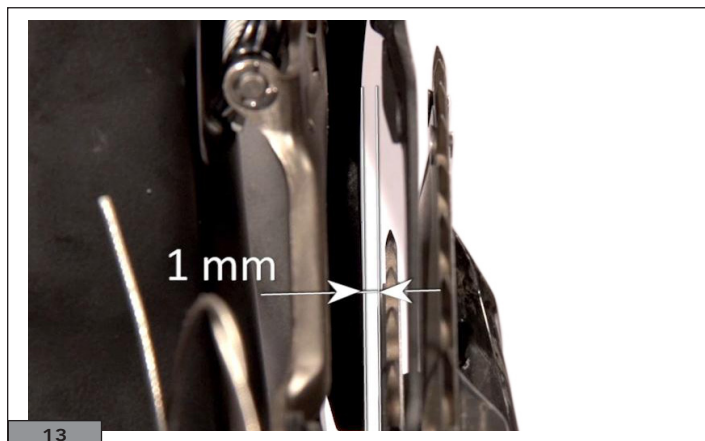
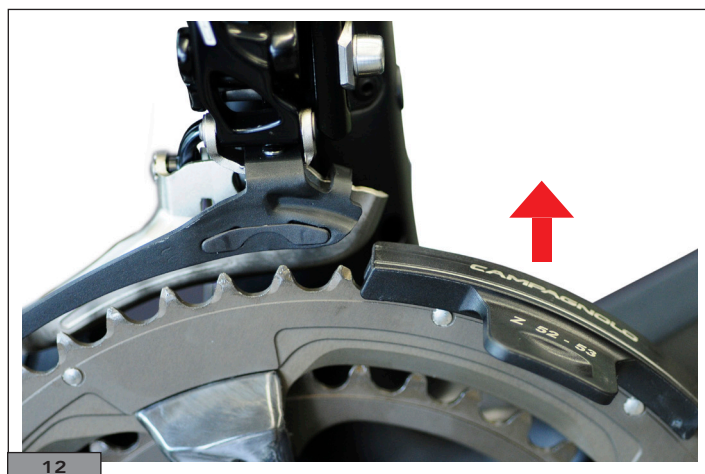
10) If your front derailleur is in the version with Secure Shifting System, rest the component on the frame, taking care to apply the protection on the frame and tighten to the prescribed torque of **4 Nm (35 in.lbs)** (Fig.2).

11) If your front derailleur provides the Chain Security Device (CSD), place the retaining surface at a distance of 1 mm from the chainring and tighten the nut. (Fig. 13).

12) Install the chain, positioning it on the smaller chainring and on the larger sprocket.

13) Fit the housing with the correct length keeping in mind that in case of routing of the cables inside the frame, it is necessary to also fit the Campagnolo cable tension adjuster of the front derailleur that is included in the package of the Ultra – Shift / Power - Shift (POTENZA 11™) commands. The tension adjuster is placed with the knurled part on the bottom. The lower housing must provide the housing end cap while the upper housing is fitted without housing end cap (Fig.14).

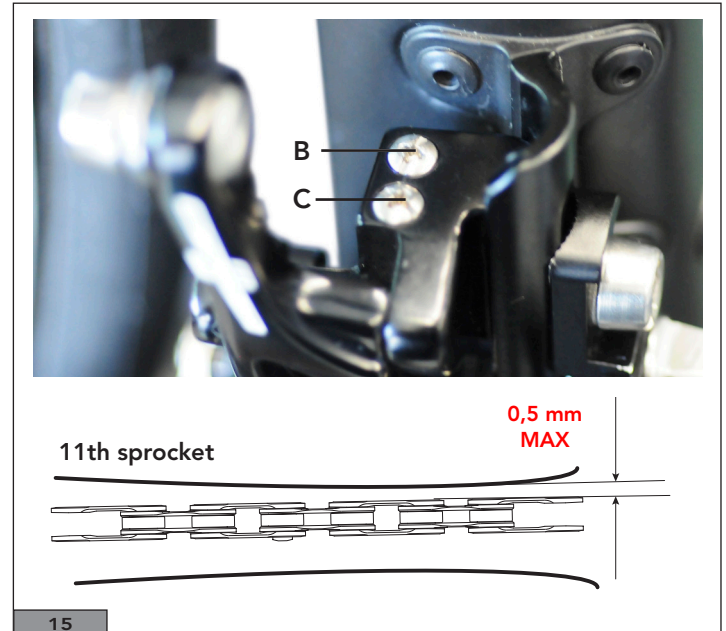
The tension adjuster is placed near the handlebar in an area where it does not interfere with the frame.



4.3 - REGISTRATION OF THE FRONT DERAILLEUR

4.3.1 - Lower position

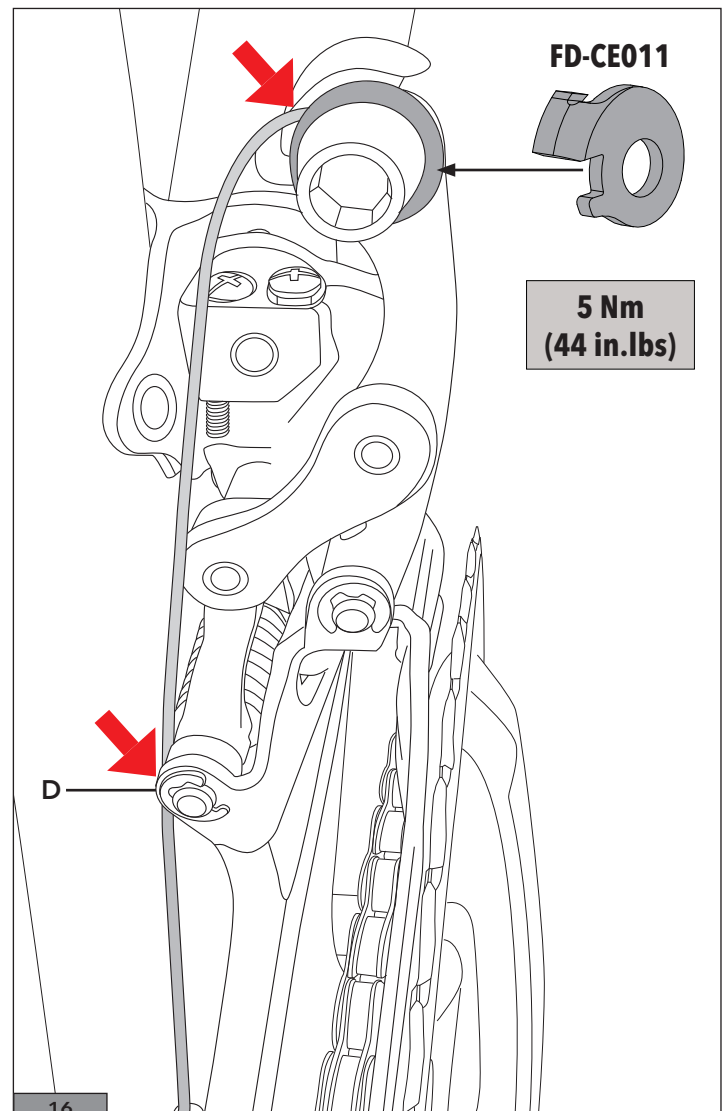
1) With the chain on the smaller chainring and on the larger sprocket, adjust the screw of internal end stop (B – Fig.15) of the front derailleur so that the internal side of the fork has a maximum distance of 0.5 mm to the chain.



2) Act various times on the internal left command lever (Fig. 16)

3) Pull the cable slightly, place it in the spline under the washer and lock it by tightening the screw to a torque of **5 Nm (44 in.lbs)** (Fig. 16).

- If the cable touches the front derailleur in the area below the fastening point (D - Fig. 16), in order for the front derailleur to function correctly, replace the existing washer with a washer (code FD-CE011) that holds the cable further in (Fig.16).



4) If possible, set the drivetrain by pulling the cable slightly (Fig. 17). If tension is lost, repeat point 3.

IMPORTANT!

If you have a frame with internal cable runs, also ensure that there is no contact between the front and rear derailleur cables: if necessary, loosen the front derailleur entirely, checking operation of the rear derailleur in these conditions.

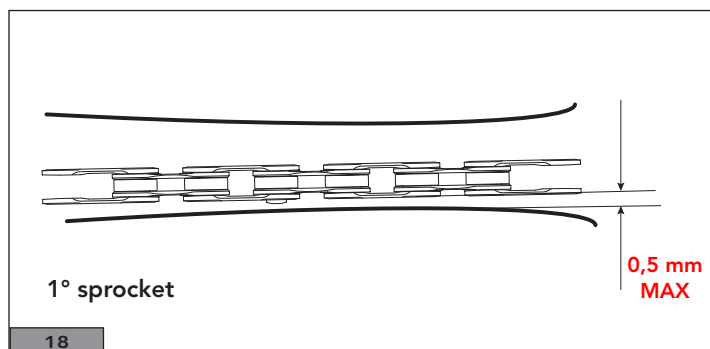


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4.3.2 - Upper position

1) Make the chain shift up on the larger chainring with 3 jerks: if this is not done correctly, act on the cable tension.

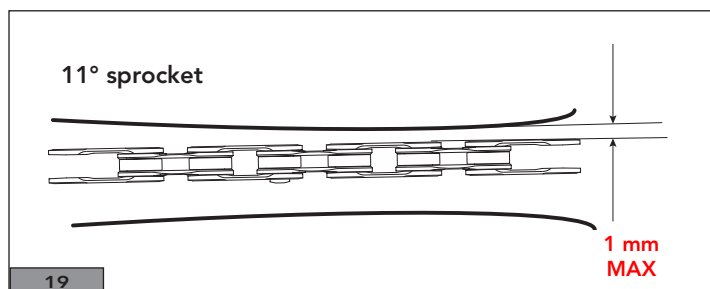
2) Perform the end adjustment of the cable tension. Still on the big chainring, bring the rear derailleur down onto the smaller sprocket and observe the position of the chain in relation to the outer face of the fork: the outer face of the fork must be a maximum of 0.5 mm from the chain and the chain must not drag on the fork, otherwise act on the front derailleur cable tension. (Fig. 18).



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3) Adjust the outer end stroke screw (C - Fig. 15) so that it rests on the end stroke surface.

4) Remaining on the larger chainring, go up with the rear derailleur on the largest sprocket and observe the position of the chain with respect to the internal side of the fork: ensure that the position of chain with respect to the internal side of the fork is no more than 1 mm and that the chain does not scratch against the fork. If the chain scratches against the fork, loosen the cable. (Fig. 19).



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WARNING!

After having registered the front derailleur, carry out some derailing by checking that the chain never falls inside the smallest chainring neither outside the largest chainring.

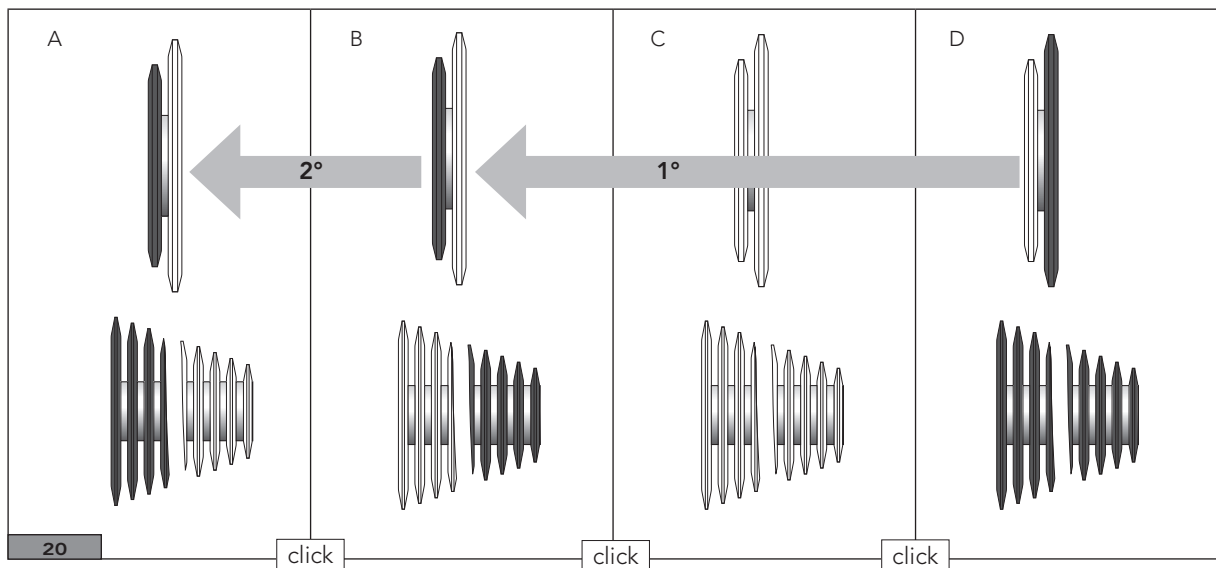
4.3 - OPERATION OF THE FRONT DERAILLEUR

The correct operation provides that, when the chain is on the larger chainring, it has no contact with the fork, regardless where the rear derailleur is placed.

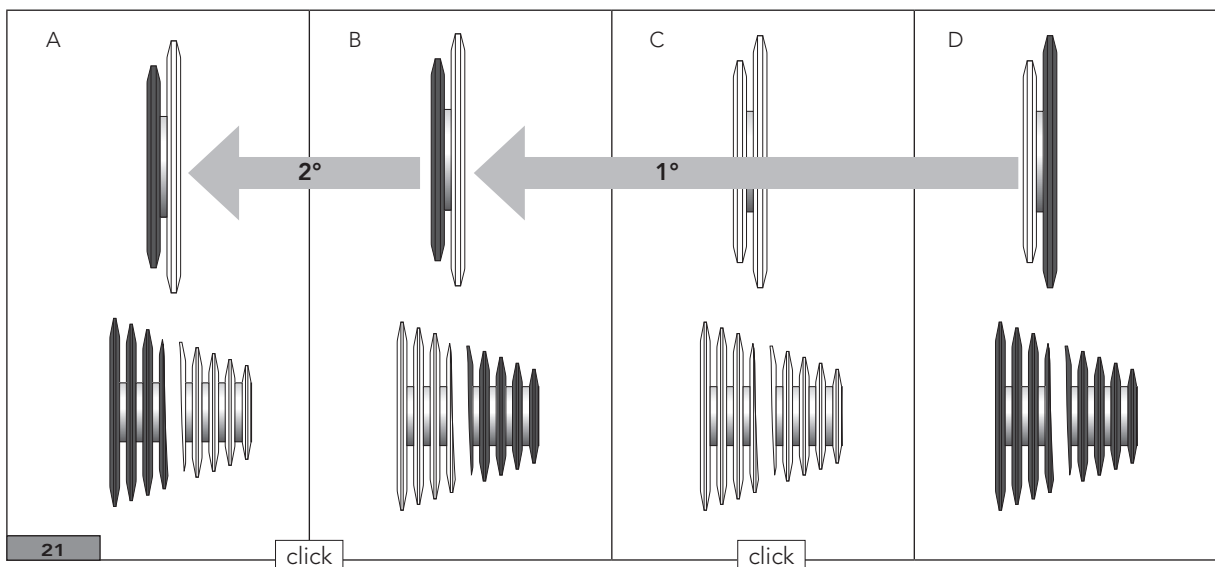
This condition is given, when the Campagnolo technical specifications were followed (relative to the used frame), when the front derailleur has been placed properly and when the correct adjustment of the endpoints of the front derailleur and of the cable tension were carried out (Pos.D - Fig.20).

The front derailleur is designed so that the reduction from the larger chainring to the smaller chainring is done with one single activation until the end stop (2 clicks) of the left Ergopower internal lever. This operation significantly reduces the risk of chain fall to the inside part of the frame, as the derailleur cage is kept very close to the chain (1st activation / Pos.B - Fig. 20/ Fig. 21).

ERGOPOWER ULTRA-SHIFT (SUPER RECORD / RECORD / CHORUS)

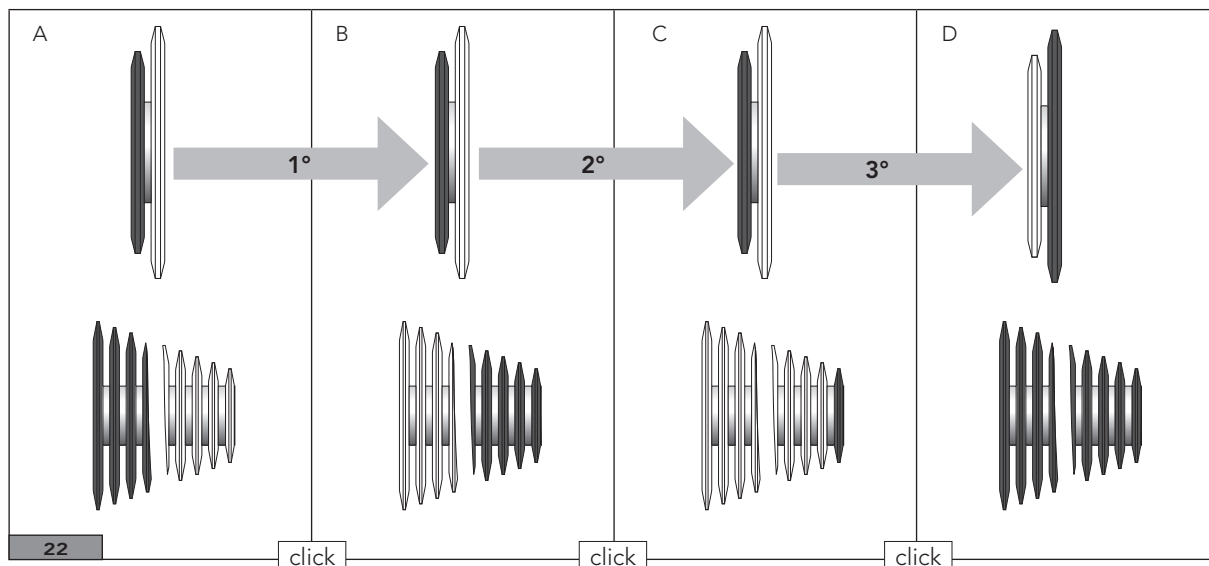


ERGOPOWER POWER-SHIFT (POTENZA 11™ / CENTAUR 11)

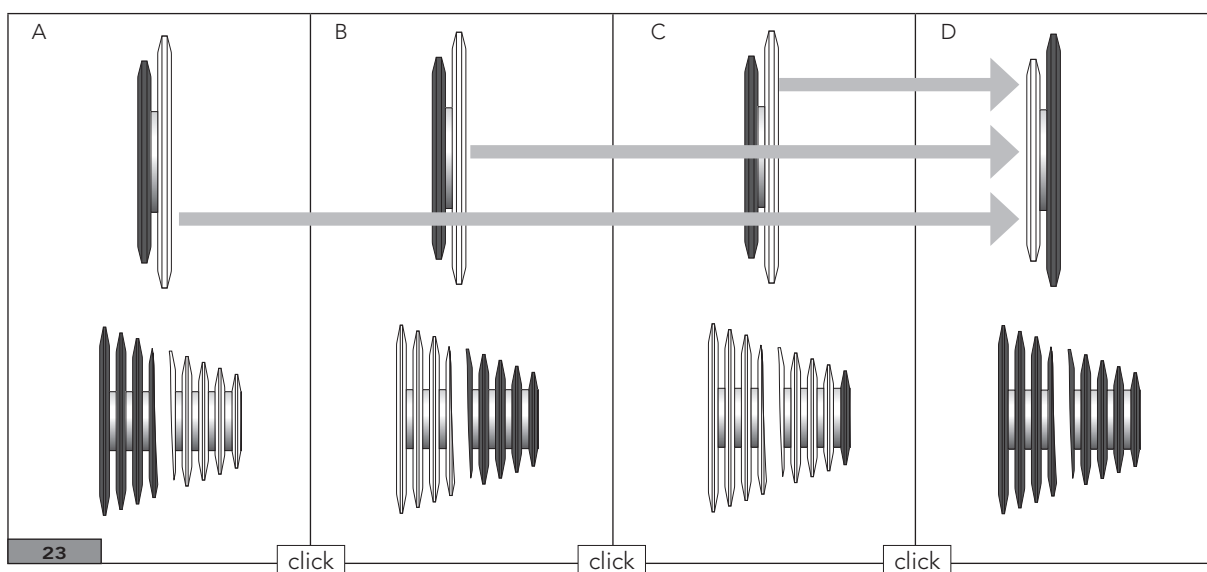


It may therefore happen that the chain scratches on the fork if, during the reduction, the rear derailleur is on the largest sprocket: to eliminate the noise, once the chain is positioned on the smaller chainring, perform a 2nd activation (1 click) again with the internal lever (2nd activation / Pos.A - Fig.21).

From Pos. A, if going down with the rear derailleur on the smallest sprockets, to prevent the slipping of the chain on the fork, can be performed a 1st activation and if necessary a 2nd activation of the front derailleur, passing to the positions B and C (1st and 2nd activation - Fig.22).



The increase from the small chainring to the large one can then take place with one activation of 1, 2, or 3 clicks depending on the starting position of the front derailleur (Pos. C, Pos B or Pos. A respectively - Fig. 23).



IMPORTANT!

If you have a frame with internal cable runs, also ensure that there is no contact between the rear and front derailleur cables. If necessary, completely loosen the rear derailleur cable, checking front derailleur operation in these conditions.

5 - MAINTENANCE

• Never remove the spring of the front derailleur from its position.

If this operation had been performed, contact a Campagnolo Service Centre to restore the functionality of the front derailleur.

• Lubricate the joints in the front derailleur mechanism regularly with oil; check that the rod movement is always free.

• Check that the front derailleur is oriented correctly:

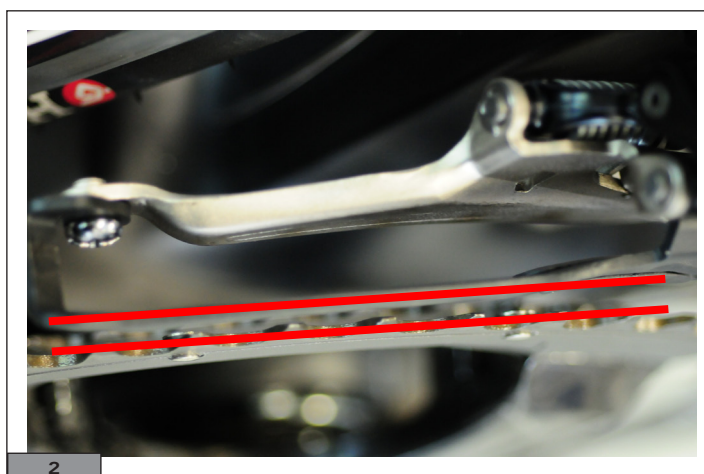
- the derailleur cage must have a distance of 1.5-3 mm to the largest chainring (Fig. 1).

- the external side of the derailleur cage must be parallel to the largest chainring (Fig. 2).

• The life of the components is variable depending on conditions of use, the frequency and quality of maintenance. For a good maintenance of the components it is therefore necessary to repeat frequently cleaning and lubrication, especially in severe conditions of use (e.g. every time after washing the bicycle, after each ride on wet, dusty or muddy roads, etc.).

• Dirt seriously damages the bicycle and its components. Rinse, clean and dry your bicycle carefully after use.

• Never wash your bicycle using pressurised water. Pressurised water - even from a normal garden hose - may infiltrate through the seals and into your Campagnolo® components, causing irreparable damage. Wash your bicycle and its Campagnolo® components cleaning delicately with water and neutral soap. Dry with a soft cloth: Never use abrasive or metallic sponges.



WARNING!

Salty environments (such as winter roads or roads near the sea) may lead to galvanic corrosion of most of the bicycle's exposed components. To prevent damage, malfunctions and accidents, rinse, dry and carefully re-lubricate all components which are subject to this phenomenon.

Maintenance intervals are strictly approximate and may vary significantly in relation to the intensity and conditions of use (for example: competitions, rain, winter roads with salt, weight of the athlete, etc.). Schedule the appropriate maintenance with your mechanic.

PROCEDURE	MILEAGE IN KM (MAX)	TIME (MAX)	METHOD FOR CHECKING
check screws are tightened to the correct torque	2000	2 months	torque wrench
Lubricate the joints in the front derailleur mechanism as normal with oil	6000	6 months	